

The readiness of information technology of Rajamangala University of Technology Phra Nakhon for educational communication to ASEAN

Kreadtisak Lappanitchayakul
Division of Information System, Faculty of Business Administration
Rajamangala University of Technology Phra Nakhon
Bangkok, Thailand
kreadtisak.1@rmutp.ac.th

Abstract—The objective of this research was to study the readiness of information technology of Rajamangala University of Technology Phra Nakhon to support educational communication in AEC [1]. This quantitative research used questionnaire to collect data from the sample group, who was 40 professors from Faculty of Business Administration, Rajamangala University of Technology Phra Nakhon.

Findings illustrated that the readiness of information technology for classroom at Faculty of Business Administration was 93.75%. The opinion of respondents on the readiness of information technology was in good level, average at 4.06. Regarding the access to internet network of the university, the respondents agreed that it was in good level (4.11) with the use through various channels such as LAN, WiFi, and VPN. Further, the respondents accessed internet via other devices provided by the university such as personal computer, notebook, mobile, and tablet. The respondents stated that they use internet for the purpose of academic, social media, communication with foreigners, and research.

Keywords—*information technology for education communication; readiness of information technology; ASEAN Rajamangala University of Technology Phra Nakhon*

I. INTRODUCTION

Nowadays, Thailand entered Asean Economics Community or AEC by the end of 2015, which is the gathering of ten countries in ASEAN: Thailand, Myanmar, Laos, Vietnam, Malaysia, Singapore, Indonesia, Philippines, Cambodia, and Brunei. The slogan is “One Vision One Identity One Community” [1].

Rajamangala University of Technology Phra Nakhon is one of the universities that is awakened and respond to the government policy for entering AEC as the educational center of ASEAN. Thailand has organized the volunteer for rural development for ASEAN project, seminar on knowledge management network “Knowledge Management Integration to AEC”, International Academic Seminar Project “Upgrading ASEAN Quality of Life and Local Wisdom”, Thai Arts and Innovations Training Project to ASEAN Youth, Thai and ASEAN Student Exchange Program such as Singapore and Vietnam.

With this reason, to promote the potential of Rajamangala University of Technology Phra Nakhon to join AEC the preparation of the university for information technology for educational communication to enter AEC is crucial and necessary, particularly internal communication in Rajamangala University of Technology Phra Nakhon and between Rajamangala University of Technology Phra Nakhon and the universities from neighboring countries [2].

II. RESEARCH OBJECTIVES

- To study and evaluate the satisfaction of personnel of Rajamangala University of Technology Phra Nakhon on basic information technology of the university regarding educational communication.
- To examine and evaluate the readiness of personnel of Rajamangala University of Technology Phra Nakhon on basic information technology of the university regarding educational communication.
- To develop potential of personnel of Rajamangala University of Technology Phra Nakhon to be ready for implementing information technology of Rajamangala University of Technology Phra Nakhon to enter AEC.

III. CONCEPTS

A. *Readiness of information technology to support educational communication.*

Readiness of information technology to support educational communication is the equipment and internet that is useable at all times.

As technology is important and necessary for education nowadays, both for teaching and searching for more knowledge of professors, personnel, and students of Faculty of Business Administration, Rajamangala University of Technology Phra Nakhon, although the readiness of information technology is efficient, the readiness of personnel to learn how to implement modern information technology is required.

In short, the concept of readiness of information technology to support educational communication refers to the sufficiency of information technology equipment using in education by professors, personnel, and students.

Definition 1: Readiness of information technology refers to the availability of basic information technology for education such as computer, projector, and visualizer[3].

B. *Measuring and evaluating the readiness of information technology to support educational communication.*

Measuring and evaluating the readiness of information technology to support educational communication is to measure the readiness of information technology equipment using in education such as the adequate quantity of equipment to the classroom number.

Development and implementation of information technology to teaching and learning have direct and indirect effects. Direct effect is that it offers quality teaching and

learning while indirect effect falls on professors, personnel, and students in searching more knowledge outside classroom.

IV. CONCEPTUAL FRAMEWORK

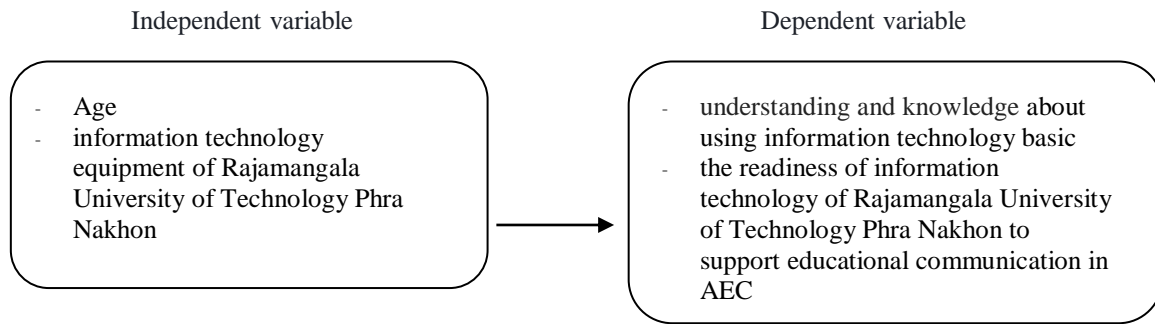


Fig. 1. Conceptual Framework

Definition 2: Information technology equipment of Rajamangala University of Technology Phra Nakhon refers to the equipment relating to technology and education which Rajamangala University of Technology Phra Nakhon applies in teaching and learning such as projector, visualizer, and computer [4-5].

Definition 3: Basic information technology refers to the equipment relating to technology and education which Rajamangala University of Technology Phra Nakhon applies in teaching and learning such as projector, visualizer, computer, LAN and WiFi internet.

V. RESEARCH METHODOLOGY

This was the quantitative research applying survey research and qualitative research. The sample group was 40 professors from Faculty of Business Administration.

A. Research tool.

Questionnaire was created based on the research objective and research framework and divided in to five parts:

- Part 1 Personal information of respondent.
- Part 2 Behavior of using information technology of the university.
- Part 3 Readiness of information technology of the university.
- Part 4 Actual condition and expectation (Demand).
- Part 5 Additional opinion

Survey form about the readiness of information technology system.

B. Creating the questionnaire.

Regarding the questionnaire, the researcher followed the following step to obtain the quality questionnaire.

- Study relevant documents, text books, articles, and researches.
- Study, compile, and synthesize the information obtained from Step 1.
- Create the questionnaire to evaluate the satisfaction of the personnel of Rajamangala University of Technology Phra Nakhon.

- Propose the questionnaire to the expert to validate content validity by finding Index of Item –Objective Congruence: IOC) .There were three levels for scoring:

+1: Confident that the questions were validated.

0: Non-confident that the questions were validated.

-1: Confident that the questions were not validated.

Represent the value in the formula.

$$IOC = \frac{\sum R}{N}$$

IOC represented IOC

$\sum R$ represented total score of the expert's opinion.

N represented number of expert.

Score from 0.5-1 was applicable to the questionnaire

Score lower than 0.5 required the revision.

VI. DATA ANALYSIS

The researcher analyzed the statistical data using computer program as the following details.

- Personal information of the respondent was analyzed using Frequency and Percentage.
- Behavior of using information technology of the university was analyzed using Frequency and Percentage.
- The use of information technology of the university was analyzed using Frequency and Percentage.
- Actual condition and expectation on information technology were analyzed by Mean.

VII. RESEARCH RESULTS

The study and evaluation of satisfaction of the personnel of Rajamangala University of Technology Phra Nakhon on basic information technology of the university relating academic communication:

A. Personal information of the personnel of Faculty of Business Administration.

From 40 respondents, 15 were male and 25 were female, accounting for 37.5% and 62.5% respectively, aged between 26-55 years old. However, most of respondents aged between 36-45 years old and 36 of them graduated with Master's degree.

B. Behavior of using information technology of the university.

Regarding behavior of using information technology of the university, the respondents used the computer provided by faculty, however, some used personal computer, tablet, Ipad, and smart phone. During 12.00-13.00 and 13.00-16.00 were the period that the internet was accessed the most, accounted for 65.0% and 80.0% respectively.

85% of the respondents used information technology regularly, followed by several times per week. Most of them used information technology for the purpose of pursuing knowledge, searching online information, and sending E-mail, accounted for 90, 60, and 65.0% respectively.

C. The use of information technology system of the university.

For the use of internet account, 60% used the account regularly, followed by 40% who used it sometimes. Some stated that the internet lost the connection quite often and Wifi did not accessible of all area. This was in line with the internet service network that was used at 65%, followed by 35%.

The respondents accessed Facebook and Youtube for exploring new knowledge regularly; 50% used it frequently while another 50% used it sometimes. In regard to teaching implementing e-learning with foreigners, 55% used it frequently and 30% used it sometimes.

In regard to the overall service of information technology to support the communication in AEC, the respondents were satisfied with the permission to use other equipment to access internet system of the university, and 70% accessed the internet regularly. The use for other purposes such as for study and research, long-distance conference via LAN and Wifi was at 70% whereas some accessed internet network of the university via VPN, accounted for 65%.

D. Actual condition and expectation of the respondents on information technology.

The respondents had knowledge and skills in using information technology at 4.4 and had the expectation on E-service system to support the communication in AEC, at the average, at 4.11 as show in Table I. However, from the actual condition, the respondents scored it at the average, at 3.56 as show in Table I. In regard to the infrastructure of information technology service to support communication in AEC, the respondents had the average expectation at 3.97 as show in Table II, however, from the actual condition, they scored it at the average at 3.42 as show in Table II.

TABLE I. THE EXPECTATION ON E-SERVICE SYSTEM TO SUPPORT THE COMMUNICATION IN AEC.

Detail	the expectation	The actual condition
1. Computer user account system	4	3.85
2. e-mail system for professor	4.35	3.55
3. Internet service system	4.1	3.75

Detail	the expectation	The actual condition
4. IT problems report system	4	3.45
5. the use of social media such as Facebook, You Tube to learn new global knowledge	4.15	3.5
6. teaching and learning via online learning resource such as using e-learning with foreigner	4.05	3.2
7. access of online media such as Facebook Live, You Tube Live in new communication pattern	4.15	3.65
Average	4.11	3.56

TABLE II. THE INFRASTRUCTURE OF INFORMATION TECHNOLOGY SERVICE TO SUPPORT COMMUNICATION IN AEC

Detail	the expectation	The actual condition
1. permission to connect personal device to the university's internet network such as Smart phone, Ipad	4	3.75
2. the access of internet in the university	4.1	3.7
3. international network roaming management for education (eduroam)	4	3.25
4. IP Telephony	3.75	3
5. LAN	4	3.55
6. Wifi	4	3.45
7. connection system from the outside to the university's internal system (VPN)	3.95	3.3
Average	3.97	3.42

Definition 4: VPN [6] stands for Virtual Private Network which connects with the outside network to enable the safer data transfer and facilitate the connection with server and equipment in the same network.

E. Knowledge and skills in using information technology of the respondents.

The respondents aged 31-40 years old had the average knowledge and understanding in using information technology in good level, 4.61, followed by 41-45, and 46-50 years old respectively.

In regard to reporting IT problems, there were 45% who were regular users, followed by 35%. It implied that problems of using IT obstructed the respondent. As a result, there was the use of IT expert service.

F. Readiness of physical information technology in classroom.

The researcher surveyed 64 classrooms at Faculty of Business Administration and found that each classroom had projector, visualizer, switching device, computer, sound audio, and internet. From 64 classrooms, 60 classrooms were fully equipped with the mentioned equipment, accounted for 93.75%.

VIII. DISCUSSION

The research result finds that the respondents aged 31-40 years old had the average knowledge and understanding in using information technology in good level, 4.61. Readiness of physical information technology in 64 classrooms at Faculty of Business Administration, 60 classrooms were fully equipped with the mentioned equipment, accounted for 93.75%. The respondents had knowledge and skills in using information technology at 4.4 and had the expectation on E-service system to support the communication in AEC, at the average, at 4.11. However, from the actual condition, the respondents scored it at the average, at 3.56. In regard to the infrastructure of information technology service to support communication in AEC, the respondents had the average expectation at 3.97, however, from the actual condition, they scored it at the average at 3.42.

IX. CONCLUSION

Findings from the research on the readiness of information technology of Rajamangala University of Technology Phra Nakhon to support educational communication in AEC showed that there was the use of various system of information technology for researching and communication through LAN and WiFi. There were some problems of connecting internet as it frequently disconnect. In regard to equipment in classroom, there was the readiness in all aspect, however, there was some technical problems during teaching and learning. The users would report to IT staff to resolve problem.

The researcher gives the suggestion on the solution of the stability of internet, both for LAN and WiFi. Further, the instructor should have self-development constantly in terms of information technology training and basic solution. Training on new information technology implementation should be organized for the personnel of Faculty of Business Administration in order to enhance knowledge and understanding of using basic information technology.

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